

coccoid green algae. *Biodiversity and Conservation* 17, 381 – 392.

- European Commission (2000) Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy. *Official Journal of the European Communities* L327, 1 – 72.
- Goodyer, E. (2013). Quantifying the Desmid Diversity of Scottish Blanket Mires. PhD Thesis, University of Aberdeen.
- John, D.M. & Williamson, D.B. (2009). *A Practical Guide to the Desmids of the West of Ireland*. Martin Ryan Institute, National University of Ireland, Galway.
- John, D.M., Williamson, D.B. & Guiry, M.D. (2011). A Catalogue of the desmids (Streptophycophyta, Zygnematophyceae, Zygnematales) of Ireland. *Occasional Papers* 15, 1 – 83, National Botanic Gardens, Glasnevin, Dublin.
- Lang, P., Procházková, L., Krokowski, J., Meis, S., Spears, B.M., Milne, I. & Pottie, J. (2013). The bizarre Eustigmatacean alga, *Pseudostaurastrum limneticum* (Borge) Chodat, in a shallow, nutrient-enriched Scottish loch: new to the British Isles. *The Glasgow Naturalist* 26, (in press).

Hoverfly records from Coll and Tiree (Diptera, Syrphidae)

E. Geoffrey Hancock¹, Jeanne Robinson² & Mary Sumner³

¹The Hunterian (Zoology Museum), University of Glasgow, G12 8QQ; ²Jeanne Robinson, Glasgow Museums, Glasgow Museum Resource Centre, Woodhead Rd, Glasgow, G53 7NN; ³Mary Sumner, 3 Strathburn Gardens, Inverurie, Aberdeenshire, AB51 4RY

INTRODUCTION

There is little published literature on the hoverflies (Diptera, Syrphidae) from the adjacent isles of Coll and Tiree, outermost of the Ebudes (Inner Hebrides). New hoverfly records resulting from visits to the islands of Coll and Tiree in 2010 (Hancock & Robinson) and Tiree in 2012 (Hancock) initiated a search for earlier relevant records. The list below is augmented with previously unpublished data extracted from the Boyd Barr collection held at the The Hunterian (Zoology Museum), Glasgow. Barr collected generally in the west of Scotland and had a particular interest in the genus *Microdon*, populations of which were studied on Mull (Barr, 1995; Schönrogge, *et al.*, 2008). He

resided on Coll for short periods between 1994 and 1996 and collected hoverflies but did not publish details or forward data to the national Hoverfly Recording Scheme so his records were not included in the maps of Ball *et al.* (2011).

Published records from Tiree in Skidmore (2008) were mostly his own observations from 25–29 June 1999. These missed being incorporated in Ball *et al.* (2011) but there are a number of ‘dots’ representing species records from both islands derived from earlier sources. These sources have been identified and so can be included here for completeness. These comprise a list of hoverflies recorded by Joan Childs from The Reef (RSPB Reserve), Tiree in August 2009 and data extracted by Kenn Watt from specimens in the Arthur B. Duncan and Ian C. Christie collections at the National Museums Scotland (NMS), Edinburgh. These specimens are from both Tiree and Coll, captured between 1985 to 1999. Thus the list summarises all available data that have been located on hoverflies from Coll and Tiree.

SPECIES LIST

Nomenclature follows Chandler (1998) with some updates given by Ball *et al.* (2011). Following the arrangement in these two works the species are presented in alphabetical order, due to fluidity in hoverfly higher classification. The collection details are abbreviated and the abbreviations are explained at the end of the species list.

- Cheilosia illustrata* (Harris). **Coll**, Grishipol, 1984 (KW in Ball *et al.*, 2011)
- Dasysyrphus tricinctus* (Fallén). **Coll**: BB1
- Episyrphus balteatus* (De Geer). **Tiree**: 8, [Skidmore]
- Eristalinus aeneus* (Scopli). **Tiree**: 8; **Coll**: BB1, BB2, Meall nan Man, 1984 (KW in Ball *et al.*, 2011)
- Eristalinus sepulchralis* (Linnaeus). **Tiree**: 3, [Skidmore], Hough, 1974 (KW in Ball *et al.*, 2011)
- Eristalis abusivus* Collin. **Tiree**: [Skidmore]
- Eristalis arbustorum* (Linnaeus). **Tiree**: 8, [Skidmore], Hough, 1974 (KW in Ball *et al.*, 2011); **Coll**: 4; BB2, BB4, Meall nan Man, 1984 (KW in Ball *et al.*, 2011)
- Eristalis horticola* (De Geer). **Tiree**: 3, 8, [Skidmore]; **Coll**: BB4
- Eristalis intricarius* (Linnaeus). **Tiree**: 1, 8, [Skidmore], Hough, 1974 (KW in Ball *et al.*, 2011); **Coll**: BB2, Torastan, 1974 (KW in Ball *et al.*, 2011)
- Eristalis tenax* (Linnaeus). **Tiree**: 8
- Eupeodes corollae* (Fabricius). **Tiree**: 1, 8, [Skidmore]; **Coll**: BB1, BB4
- Eupeodes latifasciatus* (Macquart). **Tiree**: 8
- Eupeodes luniger* (Meigen). **Tiree**: 8
- Helophilus pendulus* (Linnaeus). **Tiree**: 5, [Skidmore], Hough, 1974 (KW in Ball *et al.*, 2011); **Coll**: 4, BB1, BB2, BB4, Torastan, 1984 (KW in Ball *et al.*, 2011)
- Helophilus trivittatus* (Fabricius). **Tiree**: 2; **Coll**: BB2

Lejogaster metallina (Fabricius). **Tiree:** [Skidmore];
Coll: BB4
Melanogaster hirtella (Loew). **Tiree:** 4, [Skidmore];
Coll: 1, BB4
Melanostoma mellinum (Linnaeus). **Tiree:** 1, 2, 6, 8,
[Skidmore]; **Coll:** 3, 4, BB3, BB4
Neoscia tenur (Harris). **Tiree:** [Skidmore]
Platycheirus albimanus (Zetterstedt). **Tiree:** 8; **Coll:**
3; BB1
Platycheirus angustatus (Fabricius). **Tiree:**
[Skidmore]; **Coll:** BB4
Platycheirus clypeatus (Meigen). **Tiree:** 1, 8,
[Skidmore]; **Coll:** 1, 2, BB1, BB4
Platycheirus granditarsus (Forster). **Coll:** BB1
Platycheirus manicatus (Meigen). **Tiree:** 3, 5, 6, 8,
[Skidmore], Hough, 1974 (KW in Ball et al., 2011)
Platycheirus occultus (Goeldlin, Maibach & Speight).
Coll: BB1
Platycheirus rosarum (Fabricius). **Tiree:** 5.
Platycheirus scambus (Staeger). **Tiree:** 6,
[Skidmore]
Rhingia campestris Meigen. **Tiree:** 5, 8; **Coll:** BB4
Scaeva pyrastris (Linnaeus). **Tiree:** 8
Scaeva selenitica (Meigen). **Coll:** BB1
Sericomyia silentis (Harris). **Tiree:** 1, [Skidmore];
Coll: 1; BB1; BB4
Sphaerophoria fatarum Goeldlin de Tiefenau. **Coll:**
BB1
Sphaerophoria interrupta (Fabricius). **Tiree:** 8,
[Skidmore]
Sphaerophoria philanthus (Meigen). **Coll:** BB1
Syritta pipiens (Linnaeus). **Tiree:** 1, 7, 8; **Coll:** BB4
Syrphus ribesii (Linnaeus). **Tiree:** 8; **Coll:** BB1
Syrphus vitripennis Meigen. **Tiree:** [Skidmore]
Trichopsomyia flavitarsus (Meigen). **Tiree:**
[Skidmore]; **Coll:** 1.
Volucella bombylans (Linnaeus). **Tiree:** 1, 8; **Coll:** 1,
4, BB1, Torastan, 1973 (KW in Ball et al., 2011)

Abbreviations: BB = Boyd Barr; EGH = Geoff Hancock; JR = Jeanne Robinson; JC = Joan Childs; KW = Kenn Watt.

Tiree localities, 2009-2012:

1. Vaul, 22 August 2012, EGH. Coastal grassland with wet ditches, NGR: NM0449.
2. Balephetrish, 23 August 2012, EGH. Machair grassland behind dunes, NGR: NM0147.
3. Baugh, 22 June 2010, EGH. Fixed dune grassland, NGR: NM0143.
4. Milton, 22 June 2010, EGH. Wet ditches in peat bog, NGR: NM0847.
5. Barrapol, 21 June 2010, JR. Freshwater loch side vegetation, NGR: NL9643.
6. Gott Bay, 22 June 2010, JR. Small area of dunes with tidal ditch, NGR: NM0346.
7. Sandaig, 23 June 2010, EGH, dune grassland, NGR: NL9342.
8. The Reef, August 2009, JC, dune grassland, NGR: NM0045.

Coll localities for 2010:

1. North Shore, 24 June 2010, EGH & JR. Dune grassland and ditches nearby, NGR: NM2763.
2. Cliad Bay, 23 June 2010, JR. Coastal grassland, NGR: NM1960.
3. Ballyhaugh, 22-23 June 2010, EGH & JR. Coastal grassland and freshwater loch, NGR: NM1757.
4. Crossapol, 25 June 2010, EGH & JR. Fixed dunes, NGR: NM 1553.

Specimens collected by JR are deposited at Glasgow Museums Resource Centre, Accession Number Z.2012.2. Those collected by EGH are in The Hunterian (Zoology Museum), Entry Numbers 839 (2010) and 1361 (2012).

Coll localities sampled by Boyd Barr during 1994-1996

These are extracted from specimens preserved in The Hunterian from his collection which was acquired in 2001 (Entry Number: Zoo/35/2001).

BB1. Arinagour, 13 May 1994 - 12 August 1996, NGR: NM2156
BB2. Cornaigbeg, 9-14 May 1994 - 26 July 1995, NGR: NM2362
BB3. Hyne, 27 May 1994, NGR: NM2055.
BB4. Feall Bay, east end, 12-27 June 1994, NGR: NM1454.

COMMENTS

Field work in 2010 and 2012 confirmed 16 of the 22 species from Tiree recorded by Skidmore (2008) and added 9 that were not in his list. Three of Skidmore's that were not seen in Tiree were recorded in 2010 from Coll. From the latter island Barr's collection contains preserved examples of 23 species of which 13 have not been reported by others. Two species, *Cheilosia illustrata* and *Trichopsomyia flavitarsus*, are added to Barr's total. Overall 31 species are listed above from Tiree and 25 species from Coll. None of the species are beyond their known geographical range or found in unexpected circumstances. *Episyrphus balteatus* was absent from our samples in 2010 as the sampling was too early in the season. But it was also not seen on Tiree in 2012, despite it being August, normally the peak month for the species. Curiously, for this common migratory fly, neither are there specimens in Barr's collection. He might not have bothered to preserve examples of this common fly, which is so easily identifiable in the field, but he did keep samples for localities in Mull and other parts in the west of Scotland. Given the close studies he made of *Microdon* (Barr, 1995), it would seem the genus is genuinely absent from Coll.

ACKNOWLEDGEMENTS

Thanks are due to Glasgow Natural History Society whose Blodwen Lloyd-Binns Bequest partly funded field work in 2010. That visit, in the company of Garth Foster (Aquatic Coleoptera Conservation Trust) and Darren Mann (Oxford University Museum), was supported also by Scottish Natural Heritage. Useful advice was received from the local wardens, John Bowler and Ben Jones of the Royal Society for the Protection of Birds. Joan Childs kindly made available her records from Tiree and Kenn Watt supplied data from his work on mapping Scottish hoverflies.

REFERENCES

- Ball, S.G., Morris, R.K.A., Rotheray, G.E. and Watt, K.R. (2011). *Atlas of the hoverflies of Great Britain (Diptera, Syrphidae)*. Wallingford, Biological Records Centre, pp. 183.
- Barr, B. (1995). Feeding behaviour and mouthpart structure of larvae of *Microdon eggeri* and *Microdon mutabilis* (Diptera, Syrphidae). *Dipterists Digest (Second Series)* **2**: 31-36.
- Chandler, P. J. (1998). *Checklists of British Insects (New Series) Diptera*, **12**. Royal Entomological Society of London, London.
- Schönrogge, K., Barr, B., Wardlaw, J.C., Napper, J., Gardner, M.G., Breen, J., Elmes, G.W. and Thomas, J.A. (2008). When rare species become endangered: cryptic speciation in myrmecophilous hoverflies. *Biological journal of the Linnean society* **76**: 315-315.
- Skidmore, P. (2008). A provisional list of the Diptera of Tiree. *Dipterists Digest (Second Series)* **15**: 53-65.